

1/5. (Amended) A thickness measuring unit for mounting on a water track of a polisher for measuring the thickness of a top layer of a wafer, said thickness measuring unit comprising:

- A1
- a. a curved gate having a radius of curvature generally similar to that of said wafer, said curved gate being located at a gripping position;
 - b. a window mounted in a bottom surface of said water track;
 - c. a gripper for moving said wafer from said gripping position to a measuring position above a layer of water located above said window, said gripper including a gripping having a planar surface ^{said planar surface} pad, wherein an axis of symmetry of said gripping pad is at an angle to a horizontal plane; and
 - d. an optical system, mounted underneath said window, for measuring said thickness of said top layer through said window and said layer of water.

2/5. (Amended) A thickness measuring unit for mounting on a water bath for measuring the thickness of a top layer of a wafer, said thickness measuring unit comprising:

- A2
- [a. a water bath;]
 - [b.]a. a window mounted in a bottom surface of said water bath;
 - [c.]b. a gripper for moving said wafer from a gripping position above said water bath to a measuring position above a layer of water located above said window, said gripper having a planar surface ^{said planar surface} including a gripping pad, wherein an axis of symmetry of said gripping pad is at an angle to a horizontal plane; and
 - [d.]c. an optical system, mounted underneath said window, for measuring said thickness of said top layer through said window and said layer of water.

3 13. (Amended) A method of measuring the thickness of a polished top layer of a wafer before removing said wafer from a polishing machine, said method comprising the steps of:

- a. picking said wafer up from a gripping position;
- b. moving said wafer from said gripping position to a measuring position;
- c. immersing said wafer within a bath of water over said measuring position such

that a plane defined by the circumference of said wafer is at an angle to a surface of said water;

[c.]d. placing said wafer in said measuring position underneath a surface of said water and above a window but with a thin layer of said water between said wafer and said [located above a] window; and

[d.]e. measuring said thickness of said top layer through said window and said thin layer of water.

4 15. (Amended) A method according to claim 3 wherein said water is held within a water bath and wherein said step of moving comprises the step of [changing] rotating the [angle] plane of a [the] lower surface of said water bath from a relatively horizontal plane to one which causes [move] said water to move towards said measuring position.

REMARKS

Applicant has carefully studied the outstanding Office Action. The present response is fully responsive to all points of rejection raised by the Examiner and places the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.